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## **Energy Dept. to Levy Penalties for Nuclear Safety Violations**

### ***Contractors at Mound and Oak Ridge National Laboratory Taking Corrective Actions***

The Department of Energy will cite the operating contractors for two of its sites - Babcock & Wilcox at the Mound site in Ohio and Lockheed Martin Energy Research Corporation at the department's Oak Ridge National Laboratory in Tennessee - for violations of nuclear safety rules. The proposed notices of violations will be accompanied by civil penalties of \$165,000 and \$123,750, respectively. Both penalties were partially mitigated to reflect corrective actions already taken by the contractors.

The proposed penalty at Mound covers two sets of violations -- continuing problems in the bioassay program that monitors workers' potential internal radiation exposures, and a February 1998 event when workers were unknowingly exposed to radiological conditions that exceeded their level of protection. Oak Ridge National Laboratory was cited for ongoing and repetitive failures to operate the High Flux Isotope Reactor within established safety margins.

"Workers have a fundamental right to an accurate and timely assessment of potential radiation exposures, and it is troubling that we continue to see problems in bioassay programs across the DOE complex," said Peter N. Brush, the department's Acting Assistant Secretary for Environment, Safety and Health. "We will be examining more aggressively these programs and will assess severe penalties where problems remain. Management at all DOE nuclear sites should take advantage of the next few months to take a careful look at the effectiveness of their bioassay programs for workers and make corrections as necessary."

**Babcock & Wilcox of Ohio Inc., Mound Site**

In January 1998, the Mound site identified that some 1400 bioassay results had been miscalculated. Recalculations indicated that in 205 of the samples, results originally reported as negative actually indicated a positive dose. These incorrect calculations resulted from use of new counting equipment and associated software and the failure to verify the new system with software previously being used. Last October, DOE assessed a civil penalty of \$112,500 on the previous contractor at Mound for other calculation problems with the bioassay program.

In addition to the calculation errors, Mound personnel also identified a backlog of more than 400 bioassay samples for americium-241, some of which dated back to July 1997, that had not been analyzed. Mound also identified delays in the return of 112 samples tested by offsite vendors and other problems resulting in delays in assessing worker dose.

Babcock & Wilcox was also cited for violations associated with a February 1998 event when workers were changing filters in an exhaust ventilation system. The contractor failed to include in its work planning process a review (termed an "As Low As Reasonably Achievable or ALARA") to determine if potential worker exposure to radiation was minimized and also failed to warn workers when increased radioactivity levels required work to stop and workers to leave the area. The contractor did not assess airborne radioactivity levels until after the work was done, and failed to notify one worker that his radiological work needed to be restricted until six days after the restriction period began.

The total civil penalty was partially mitigated in recognition of strong actions taken at the Mound site to correct problems in their bioassay program and prevent their recurrence. A newly-appointed Dosimetry Supervisor identified and voluntarily reported many of the problems. A management restructuring now has all dosimetry personnel reporting to a single manager who is directly accountable to top management. The department recognized that these changes have led to measurable and substantial improvement in the program.

### **Lockheed Martin Energy Research Corporation, Oak Ridge National Laboratory**

The penalty at Oak Ridge National Laboratory High Flux Isotope Reactor stems from the contractor's ongoing and repetitive failures to adhere to its established procedures that ensure that the reactor operates within appropriate safety margins. These ongoing violations were evidenced by a number of events between May 1997 and January 1998 -- leading to an unnecessary shutdown of the reactor for an extended period of time -- including:

- Operator inattention led to the overflow of a cadmium nitrate tank that serves as an emergency reactor shutdown system.
- The temperature of the primary cooling system was not maintained correctly during tests while the reactor was shutdown, triggering the emergency depressurization system to protect the reactor from thermal shock.
- Four unacceptably degraded reactor emergency cooling pump motors were relied upon for a length of time that extended over many reactor operating cycles.

"While each incident in itself did not pose an immediate safety concern, the repeated nature of these events and the fact that they span multiple locations and several organizational units indicate that the reactor was being operated in a manner that was clearly not up to our

expectations," said James C. Hall, DOE Oak Ridge Operations Manager. "Oak Ridge Operations has been actively involved in the detail of each incident and has been aggressively pursuing corrective actions, including changes in reactor management. This penalty underscores the importance we attach to safe reactor operations."

The proposed civil penalty includes a 25 percent mitigation for corrective actions already taken, including recognition of the contractor's broad investigation to fully assess the problem at the reactor and its site-wide implications. Other corrective actions include senior management changes and technical staff enhancements, substantial improvement in work planning processes and a strengthened lessons-learned process.

The enforcement actions announced today are Preliminary Notices of Violation. Each contractor is required to respond to the notice and document, in addition to the corrective actions already noted, any additional actions taken or planned to prevent recurrence. The notices will become final in 30 days unless the contractors provide sufficient justification and information to rebut the findings of the enforcement action.

The Price-Anderson Amendments Act of 1988 directed the Department of Energy to develop and enforce nuclear safety rules with its contractors. Since the program began in January 1996, the department has issued 31 Notices of Violation and civil penalties totaling more than \$1.5 million, including civil penalties waived due to statutory exemption. Copies of the Preliminary Notices of Violation and additional information are available via the Internet at: <http://tis.eh.doe.gov/enforce/>.

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